

From: Minkin, Paul NAE
To: Sneeringer, Paul J NAE; marsh.mike@epamail.epa.gov
Cc: Williams.Ann@epamail.epa.gov
Subject: RE: Revised (10.22.12) Invasive Species Monitoring Plan (UNCLASSIFIED)
Date: Thursday, November 01, 2012 4:48:40 PM

Classification: UNCLASSIFIED
Caveats: NONE

Mike,

I concur with Paul's comments and some of my earlier ones on the Facility Invasive Species Management Plan are appropriate here, as well.

The proposed four 1 meter squared plots are completely inadequate for monitoring invasive species on a site of this size. They indicate that four 1 meter squared plots will be located in each phased area, but there is no description of what this is or how large of an area. It seems they are somehow confusing monitoring for vegetation establishment (although four 1 meter squared plots are also completely inadequate for this) with monitoring for invasive species. Without knowing more about the size of the "phased areas," the proposed calculations for dominance and frequency are meaningless. With myriad ecological publications on vegetation analysis in general and salt marshes in particular, it is unfortunate that they chose to cite methods from an agricultural journal article relating to corn yield.

The entire site should be examined for establishment of invasive species - and the species to be controlled should be stated in the plan. Phragmites is certainly a threat, but what other species do they intend to control? Any nonnative? Anything listed in MA? Anything on the Corps' list of invasive and unacceptable species?

Since this is a wetland creation mitigation project, the invasive species control plan should have followed guidance in New England District's 2010 compensatory mitigation guidance.

Paul

-----Original Message-----

From: Sneeringer, Paul J NAE
Sent: Thursday, November 01, 2012 2:22 PM
To: marsh.mike@epamail.epa.gov
Cc: Minkin, Paul NAE; Williams.Ann@epamail.epa.gov
Subject: FW: Revised (10.22.12) Invasive Species Monitoring Plan (UNCLASSIFIED)

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Mike:

Thank you for forwarding a copy of the invasive species management plan for the River's End Park Salt Marsh Project (aka Appendix 12 of the October 22, 2012 Mitigation Plan). I have temporarily misplaced my CD for the October 22, 2012 Wetland Mitigation Plan. I reviewed the invasive species management plan and have the following comments:

1.) I found the invasive species management plan extremely poorly written. The write-up is very confusing. The writer needs to just keep it simple. Emphasize the main points and move on.

2.) For consistency sake, please let me know if we calling this mitigation a salt marsh creation project or a salt marsh restoration project? Since the work involves the excavation of 3-6 feet of ground, I have been thinking of it as a wetland creation project. The writer should use consistent

language throughout the invasive species management plan.

3.) Section 1.0 Introduction (page 3) indicates "in the upland brackish marshland native species will be planted..". Does this mean that "native salt marsh plants will be planted in the proposed salt marsh creation area"?

4.) Section 2.0 Goals and Objectives (page 3) indicates "these invasive plant species, particularly brackish invasive species such as *Phragmites australis* dominant (dominate?) around the periphery of the drainage swale". What is the drainage swale? the Acushnet River? the storm drain outfall?

5.) The invasive species management plan makes it clear that the removal of invasive species beyond property boundaries of the restoration area is deemed out of the scope for this invasive species management plan. Therefore, the plan should include a map that clearly documents the boundaries of invasive species control and monitoring. I want to know if this only includes the salt marsh creation site, the entire River's End Park site, or an even larger area.

6.) Section 3.0 Post-Restoration Monitoring (or Post-Construction Monitoring) (page 5): This section indicates that the proposed monitoring "is done to measure the long term performance of the restoration". Will 5-years of monitoring really tell us anything about the long-term performance of this site? In another portion of this section it states that "vegetation sampling plots will be established with each phased restoration area." What is meant by phased restoration area? Will the salt marsh creation be phased?

7.) Relative Dominance and Relative Frequency Computations (page 6): Do % signs need to be added to the computation equations in this section. For example Relative Dominance = Species Dominance X 100 (%) of Total Dominance for all species.

8.) Invasive Species Inspections (page 7): Sections 9.0 and 11.3 of the October 22, 2012 Mitigation Plan indicate that plant inspections at the River's End Park Salt Marsh site will take place monthly April to October for the first three years of monitoring and in May and September only for the last two years of monitoring. On the other hand, the invasive species management plan talks only about annual inspections. Which of these two approaches is correct? As part of the monitoring protocol permanent survey plots will be established. Are permanent survey plots appropriate if as many as seven inspections are taking place a year? Will the inspections impact the survivability of the salt marsh plant?

9.) Method of Control (pages 7-8): Are there herbicides that can be applied to invasives such as *Phragmites* growing in intertidal areas?

10.) Reporting (page 9): There is no discussion about when monitoring reports will be submitted to EPA. Will there be an invasive species section of the annual mitigation report?

Feel free to contact me if you have any questions about my comments and/or recommendations. Thanks.

Paul Sneeringer
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-----Original Message-----

From: marsh.mike@epamail.epa.gov [<mailto:marsh.mike@epamail.epa.gov>]

Sent: Wednesday, October 31, 2012 3:27 PM

To: Minkin, Paul NAE; Sneeringer, Paul J NAE

Subject: Revised (10.22.12) Invasive Species Monitoring Plan

Pauls - just wanted to make sure that you have the current Invasive Species Management Plan for review and comment. I've attached a copy of it below. (It can be found at Appendix 12 of the 10/22/12 Final Mitigation Plan submission.)

The format is a little off (artifact of saving to Word from PDF, but it should be legible. It is better formatted on the CD version, which I believe Paul S. has (10/22 Final Mitigation Plan)).

Please let me know if you have any comments on this or the 10/22/12 Final Mitigation Plan if there is anything in addition to what you already sent.

Also, please let me know if you are okay with the latest rough draft of the Rivers End Park grading plan. (I sent a copy last night). The one issue I have is with the limit of work line in the southern portion of the site. Limit of Work needs to go down to the lower elevations in the vicinity of the current swale, where they are tying in the lower contours, but I think it could be demarcated at a higher elevation where they are grading in the southern portion of the site. They have already said they would remove the "island" in the northern portion of the site, and go with low marsh there.

Please let me know if you have further comments these matters.

Thanks,

Mike

(See attached file: NEW BEDFORD SOUTH TERMINAL. INVASIVE SPECIES MGMT PLAN.10.22.12.docx)

(See attached file: REP Mitigation Grading Design.10.30.12 rough draft.pdf)

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